

REMARKS

Claims 1-10 and 13-15 are pending in this application. By the above amendment, claims 11, 12 and 16-20 have been cancelled.

The Office Action dated July 27, 2005, has been received and carefully reviewed. Each issue raised in that Office Action is addressed below.

DRAWINGS

The drawings were objected to because reference character 101a of Figure 9 is not mentioned in the specification. By the above amendment, reference character 101a has been added to the specification.

The drawings are also objected to on grounds that an electrically conductive foil attached at an end face as required by claim 17 is not shown. By the above amendment, claim 17 has been cancelled, and it is believed that this obviates the objection.

CLAIM OBJECTIONS

Claims 1, 16 and 17 are objected to. By the above amendment, claims 16 and 17 have been cancelled.

With regard to claim 1, the basis of the objection is that a device in which one or more chips are mounted on one or more substrates incorporating patterned wiring is recited. Claim 1 further requires that the "entirety or entireties" be sealed with one or more resins. The Office Action indicates that it is unclear whether the "entirety or entireties" refers to the chips or the substrates, but assumes for purposes of examination that "the entirety or entireties" applies to the semiconductor chips. Applicant confirms that this is the intended meaning of the claim, and claim 1 has been amended to make it reflect the examiner's understanding of this claim. A similar amendment has been made to claim 8.

The above amendments to claims 1 and 8 were made so that the language of the claims would be consistent with the assumption made by the examiner in making the original search. MPEP 706.07(a) provides that "a second or any subsequent action on the merits in any application or patent involved in reexamination proceedings should not be made final if it

includes a rejection, on prior art not of record, of any claim amended to include limitations which should reasonably have been expected to be claimed. See MPEP § 904 et seq. For example, one would reasonably expect that a rejection under 35 U.S.C. 112 for the reason of incompleteness would be replied to by an amendment supplying the omitted element.” In view of this statement, it is respectfully submitted that, if a new ground of rejection is raised in a subsequent Office Action, such subsequent Office Action should not be made final.

REJECTIONS UNDER 35 U.S.C. 112, SECOND PARAGRAPH

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, because “it is not clear how the one or more dies blank out and shape and to what shape and to what degree” the regions are blanked. It is respectfully submitted that claim 8 requires terminals that are formed by blanking. It is not believed necessary to claim a particular shape or a particular degree of blanking in order to be definite. If this rejection is maintained, it is respectfully requested that the examiner cite an authority to show that the shape and size of an element must be included in a claim to make that claim definite. For this reason, this rejection is respectfully traversed.

Claim 8 is also rejected under 35 U.S.C. 112, second paragraph, because it is “well established” that a product-by-process limitation is considered a “non-limitation” in a device claim. However, MPEP 2143.03 requires that all claim limitations be considered, even if they are considered indefinite. The MPEP also provides, at section 2113, that “product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps.” It is therefore submitted that apparatus claim 8 should be interpreted as to require the structure produced by the claimed die blanking step. If this rejection is maintained, it is respectfully requested that the examiner provide a citation to an authority in support of the above “non-limitation” language. This portion of the rejection of claim 8 is therefore also respectfully traversed.

REJECTIONS UNDER 35 U.S.C. 102(b)

GEVINS

Claim 1 stands rejected under 35 U.S.C. 102(b) as being anticipated by Gevins. Claim 1

requires that the entirety of a chip be “sealed with one or more resins.” The Office Action cites Gevins which shows a chip 35a mounted on a substrate 34 wherein the substrate is attached to a piece of cloth using Velcro. The Office Action states that “ ‘sealed’ is interpreted broadly.” It is noted, however, that “the broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach.” *In re Cortright*, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999); MPEP 2111.

A copy of a definition of “seal” from the American Heritage Dictionary of the English Language, Fourth Edition, 2000, is enclosed. Under none of these definitions can Gevins’ chips be said to be “sealed,” with Velcro or otherwise. The chip 35a is not “closed as if with a seal” by the Velcro or “closed hermetically” by the Velcro, or covered with a waterproof coating by the Velcro. The limitation “sealed with one or more resins” cannot be disregarded, and even a broad interpretation of claim language must be reasonable. Nothing of record suggests that one skilled in the art would describe Gevins’ chip 35a as being “sealed with a resin.” No basis for interpreting the word “seal” in the context of claim 1 to mean a chip attached to a substrate where the substrate is attached to another object with Velcro has been provided. Therefore, the rejection of claim 1 as being anticipated by Gevins is respectfully traversed.

Claims 2-7 and 13-15 depend from claim 1 and are submitted to be allowable for the same reasons as claim 1.

Claim 8 also stands rejected under 35 U.S.C. 102(b) as being anticipated by Gevins. Claim 8 includes the limitation “sealed with one or more resins” and is therefore submitted to distinguish over Gevins for at least the same reasons provided above in connection with claim 1. This rejection of claim 8 also disregards the limitation that the terminals be formed by using one or more dies. This limitation describes the structure that results from a certain operation. It is respectfully submitted that the terminals 30 of Gevins have a circular cross section (Figures 4 and 5B) and could not have been formed by dies or a blanking operation. Claim 8 and its dependent claims 9 and 10 are submitted further distinguish over Gevins for this reason as well.

KISHITA

Claim 1 also stands rejected under 35 U.S.C. 102(b) as being anticipated by Kishita.

Claim 1 requires that one or more electrically conductive patterns be formed at one or more end faces of a substrate. The interpretation used in the Office Action seems to require that every face of Kishita be considered an “end” face. Even the Office Action finds it necessary to explain that the top and bottom faces are being interpreted as end faces, seemingly because the top and bottom faces of substrate 20 would not normally be considered “end faces.” To anticipate a claim, a reference must show every limitation of the claim. MPEP 2131. The above interpretation disregards the limitation “end” and effectively treats claim 1 as if it required merely a “face” having shielding. A reasonable interpretation of “end face” does not include the top and bottom faces of Kishita. The “ends” of substrate 11 in Figure 7 of Kishita do not include electrically conductive patterns as required by claim 1. It is respectfully submitted that Kishita does not show electrically conductive patterns on the end faces of a substrate and that claim 1 is allowable over Kishita for at least this reason.

Claims 2-7 and 13-15 depend from claim 1 and are submitted to be allowable for at least the same reasons as claim 1.

Claim 8 stands rejected under 35 U.S.C. 102(b) as being anticipated by Kishita. Claim 8 also requires one or more electrically conductive patterns formed at one or more end faces. Claim 8 is therefore submitted to be allowable for at least the same reasons as claim 1.

The Office Action also does not explain how terminals 33a or 17 of Kishita could be formed by blanking as required by claim 8. It is respectfully submitted that a die blanking operation would not produce the structure illustrated in Kishita. Claim 8 and its dependent claims 9 and 10 further distinguish over Kishita for this reason.

JUSO

Claim 1 also stands rejected under 35 U.S.C. 102(b) as being anticipated by Juso. The Office Action refers to element 1 of Juso as a “substrate.” If element 1 of Juso is a substrate, this substrate has nothing on its end faces as required by claim 1. It is noted that chip 2 is mounted on an element 7 and that this element 7 might be referred to as a substrate. However, both ends of substrate 7 are covered with resin 11. Neither the ends of element 1 nor the ends of element 7 include one or more electrically conductive patterns as required by claim 1. Claim 1 and its

dependent claims 2-7 and 13-15 are therefore submitted to be allowable over Juso for at least this reason.

Claim 8 also stands rejected under 35 U.S.C. 102(b) as being anticipated by Juso. Claim 8 requires that one or more electrically conductive patterns is or are formed at one or more end faces at the bottom of at least one of the substrate or substrates and is therefore submitted to be allowable for substantially the same reasons as claim 1. In addition, Juso is stated to include terminals 5. However, these terminals do not have a structure that would be produced by die blanking as required by claim 8. Claim 8 and its dependent claims 9 and 10 are submitted to be allowable over the art of record for this reason as well.

REJECTIONS UNDER 35 U.S.C. 103(a)

GEVINS in view of MCKAVENEY

Claims 3 and 4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gevins in view of McKaveney. McKaveney does not address the shortcomings of Gevins discussed above in connection with claim 1. Claims 3 and 4 depend from claim 1 and are therefore submitted to be allowable for the same reasons as claim 1.

APA in view of INOUE

Claim 1 also stands rejected under 35 U.S.C. 103(a) as being unpatentable over the discussion in the background section of the present application in view of Inoue. The background section of the application does not teach "one or more electrically conductive patterns for shielding is or are formed at one or more end faces at the top of at least one of the substrate or substrates" as claimed. Inoue also does not disclose shielding patterns on the "ends" of a substrate under any normal meaning of the word "end." Instead, Inoue shows a layer of copper foil 16 applied over a layer of adhesive 15 on a front face of a substrate. For this reason, and based on the meaning of "end faces" discussed above, it is respectfully submitted that claim 1 and its dependent claims 2-7 and 13-15 patentably distinguish over this combination of references.

Claim 8 also stands rejected under 35 U.S.C. 103(a) as being unpatentable over the

discussion in the background section of the present application in view of Inoue. Claim 8 is submitted to be allowable for substantially the same reasons provided above in connection with claim 1.

APA in view of INOUE in view of MCKAVENEY

Claims 4 and 6 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the background section of the application in view of Inoue and further in view of McKaveney. Claims 4 and 6 depend from claim 1. Differences between the invention required by claim 1 and the discussion in the background section are provided above in connection with claim 1. Neither Inoue nor McKaveney addresses these differences. Claims 4 and 6 are therefore submitted to be allowable for at least the same reasons as claim 1 from which they depend.

HORIO in view of INOUE

Claim 1 also stands rejected under 35 U.S.C. 103(a) as being unpatentable over Horio in view of Inoue. Claim 1 requires that “one or more electrically conductive patterns for shielding is or are formed at one or more end faces at the top of at least one of the substrate or substrates.” This is not shown in Horio. Instead, Horio uses a shield cap 3. A shield cap is not an electrically conductive pattern formed at one end face of a substrate as required by claim 1. Inoue shows ends of a substrate that are uncovered. Thus, the combination of Horio and Inoue in no manner suggests the invention required by claim 1.

Claims 2-7 and 13-15 depend from claim 1 and are submitted to be allowable for at least the same reasons as claim 1.

Claim 8 also requires that “one or more electrically conductive patterns is or are formed at one or more end faces at the bottom of at least one of the substrate or substrates” and is submitted to be allowable for substantially the same reasons as claim 1. Moreover, neither Horio nor Inoue shows or suggests terminals having the structure required by claim 8. Claim 8 and its dependent claims 9 and 10 are submitted to distinguish over these references for this reason as well.

HORIO in view of INOUE in view of MCKAVENEY

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horio in view of Inoue and further in view of McKaveney. The shortcomings of Horio and Inoue are discussed above in connection with claim 1. McKaveney does not address the shortcomings of these references. Claims 4 and 6 are therefore submitted to be allowable for at least the same reasons as claim 1.

CONCLUSION


Each issue raised in the Office Action dated July 17, 2005, has been addressed, and it is believed that claims 1-10 and 13-15 are now in condition for allowance. Wherefore, reconsideration and allowance of these claims is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Scott Wakeman (Reg. No. 37,750) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.


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Respectfully submitted,

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